

Response to Office Action mailed April 28, 2005

Serial No. 10/773,012; filed February 4, 2004

Inventor: Lutz

Art Unit: 3671

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REMARKS

Claims 10, 11, 21, 25, 27, and 28 have been amended. Claims 1-9, 24, and 26 have been canceled. Claims 10-23, 25, 27, and 28 therefore are pending and are presented for review.

1. Rejection under 35 YSC § 112, Second Paragraph

The Examiner has rejected claims 10 – 20 and 28 based on 35 U.S.C. § 112, ¶ 2 as indefinite.

The Examiner objected to the term “a reference structure” in claims 10 and 28 as requiring extensive knowledge of the Applicant’s specification. Applicant does not see how “requiring extensive knowledge of applicant’s specification” can form grounds for a valid rejection based on indefiniteness since the claims must be construed in light of the specification. Nevertheless, in order to expedite prosecution, the Applicant has amended independent claims 10 and 28 to clarify the location of attachment of the vibration restraint without reference to the term “reference structure.” That is, claims 10 and 28 have been amended to indicate that the restraint is attached to (1) the engine housing and (2) the machine frame.

The rejection of claim 28 as being indefinite for incorporating the term “at least generally vertically” is traversed. The *Wu* decision did not deal with a rejection in which a claim was rejected for reciting a narrow range from the broader range. To the contrary, in *ex Parte Wu*, the Board *reversed* a rejection based on §112, ¶2 in which the Examiner erroneously concluded that the term “optionally” renders the claim indefinite. The Board

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distinguished the claim at issue from claims that contain the term “such as.” That case and the cases cited therein are inapplicable because nothing about the claim language raises a question as to whether the feature introduced by the claims is merely exemplary or not required or a required feature of the claim. The claims are, instead, merely broad. Breadth is not indefiniteness. *In re Miller*, 169 USPQ 597 (CCPA 1971), see also MPEP 2173.021.

In addition, the Examiner’s opinion that the repeated use of “at least generally vertically” somehow results in the second occurrence of that statement being a narrower statement of a range/limitation recited in the first occurrence is nonsensical. Clause (E) of claim 28 merely states that the drive shaft “extends at least generally vertically.” Clause (F) states that the engine mount also extends “at least generally vertically.” The similarity of terms should come as no surprise since the claimed engine mount surrounds the drive shaft and, presumably, extends at a similar angle. Both elements merely extend either vertically or generally vertically. Nothing about that second recitation constitutes a recitation of a narrower range/limitation within the first limitation.

2 **Rejections Under 35 U.S.C. § 103(a)**

a. **Recapitulation of Invention¹**

Portable vibratory “wet screed” machines can considerably reduce the labor required to level freshly poured concrete. The screed includes a screed plate that rests on the surface to be leveled and that is excited to vibrate by a vibratory exciter assembly, typically including an eccentric. The exciter assembly is driven by an engine coupled to a drive shaft. The engine is clamped to an engine mount that surrounds the drive shaft and that is supported on a frame mounted on the screed plate. The clamp provides only limited restraint to the engine and drive shaft relative to the vibratory assembly along the x-y reference plane. Vibrations generated upon screed operation by the eccentric vibratory assembly therefore are transmitted to the clamp point and generate severe vibrations on the engine about all three (x, y, z) axes. The vibrations are known to cause failures not only in the clutch housing, but also of the handle assembly, the fuel tank, oil seals, the engine block, etc. The vibrations in the z-axis, i.e., in an axis parallel to the axis of the drive shaft, are the most destructive.

In accordance with an embodiment of the invention, vibrations transmitted to the engine of a portable vibratory screed in a direction parallel to the drive shaft are considerably reduced through the use of a vibration restraint that provides additional support beyond that provided by the clamp assembly of the engine mount because the

¹This Section 2a is intended to provide the Examiner with some background information on the state of the art and applicant's contribution to it. It is *not* intended to distinguish specific claim for the prior art. That task is performed in Section 2b below.

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restraint is spaced from the engine mount and couples the engine housing to a reference structure. In the disclosed embodiment, the vibration restraint 20 comprises a plate 150 bolted to the engine housing 55 at its upper end and to a reference structure at its lower end. In the preferred embodiment, the reference structure comprises a plate 95 of the frame 35. The plate 150 is spaced from the engine mount.

The results are dramatic. Tests show that engines of a portable wet screeds lacking a vibration restraint exhibit, on average, an operating life of 35 to 50 hours. In comparison, engines of corresponding portable vibratory wet screeds having the vibration restraint 20 typically demonstrated operational lives of 175 to 400 hours or even more. Forty percent of the engines of the sampled machines exhibited operating lives that exceeded 200 hours. Several of the tests, exceeding 400 hours, ended without failures.

b. Traversal of Rejection

As noted by the Examiner, the Allen reference does not disclose a vibration restraint. It merely shows a wet screed having all of the disadvantages discussed above. The Owens reference discloses an arcuate extension 44 coupled to an engine 42 that provides support and stability. The extension 44 in Owens begins at handle 46, terminates at straight tube 36 of a frame 14, and is coupled to the engine 42. The extension 44 is *not* attached to a machine frame at a location that is transversely spaced from a bottom of an engine mount. In fact, it is not attached to a machine frame of the claimed type at all. The frame 14 on which the extension 44 is mounted is instead attached to the screed plate

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18 by a yoke 20. The screed plate of Owens in this regard is more analogous to the claimed frame than is the frame 14. The frame 14, on the other hand, is somewhat analogous to the handle assembly recited in claim 24. .

Furthermore, claim 1 specifies the restraint of the present invention is coupled to the machine frame at a location transversely spaced from the bottom of the engine mount.

The only structure in Owens roughly equivalent to the engine mount of the present invention is the hub shown at reference number 38 and the frame shaft 22 in Owens because only those structures surround a drive shaft delivering torque to the eccentric 16

from the motor. In Owens, on the other hand, the extension 44 is coupled to the frame shaft and, therefore, could not be construed as being transversely spaced from the "engine mount."

Because the Owens reference fails to disclose or suggest the attachment of the vibration restraint as claimed in the amended claims, it is believed that the combination of Owens and Allen is not enough to obviate amended claims 10 and 28.

Claims 11 – 20, each of which are directly or indirectly dependent on amended claim 10, should therefore likewise be considered patentable.

Claim 21 has likewise been amended to clarify that the restraint is coupled to a location on the machine frame adjacent the screed plate and transversely spaced from the engine mount. The Owens patent does not disclose providing a restraint that is coupled to a machine frame, providing a restraint that is adjacent the screed plate, or providing a restraint that is spaced from an engine mount, transversely or otherwise. The Owens reference therefore also fails to obviate amended claim 21 in light of Allen.

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Claim 25, which has now been rewritten in independent form to include the limitations of base claim 10, is allowable for the reasons discussed above and for the additional reason that the handle of Owens is mounted on the element 44 alleged by the Examiner to constitute the claimed vibration restraint and not on a machine frame.

The various dependent claims are allowable for the reasons discussed above and for reciting additional features of the invention which, considered with those of the associated independent claims, are neither disclosed nor suggested by the prior art relied upon by the Examiner.

3. Conclusion

In light of the Applicant's amendments, it is believed that each of claims 10 – 23, 25, 27, and 28 is patentable and is in condition for allowance. Such action is respectfully requested.

No fee is believed to be payable with this communication. Nevertheless, should the Examiner consider any other fees to be payable in conjunction with this or any future communication, the Director is authorized to direct payment of such fees, or credit any overpayment to Deposit Account No. 50-1170. In addition, should there be any remaining questions the attending to of which would expedite the prosecution of this application, the Examiner is requested to contact the undersigned at the telephone number appearing below.

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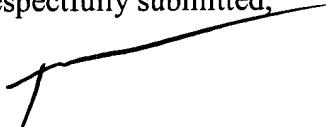
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The Examiner is invited to contact the undersigned by telephone if it would help expedite matters.

Respectfully submitted,


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Dated: July 25, 2005

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